REMARKS

The Examiner has rejected claims 1, 11, and 13 under 35 U.S.C. 112 as being indefinite. In response, the claims have been amended as follows. The acronym "TPSF" in claim 1 has been fully written at its first occurrence.

Claim 11 has been amended to read "...is complementary to said medical imaging and provides...".

Claim 13 has been amended to replace "a same" by "similar".

These amendments clarify the scope of the claims and overcome the objections under 35 U.S.C. 112.

The Examiner has rejected claims 1-7, and 10-13 under 35 U.S.C. 102(b) as being anticipated by Chance (US 5,987,351). The rejection is respectfully traversed.

The invention of the present application resides in the fact that the light is injected at a plurality of wavelengths and that the TPSF data for the plurality of wavelengths is detected simultaneously. This is clearly defined in the specification at page 4, paragraph 16 where it is stated:

"...however, for the imaging to be "simultaneous", the time window reserved for acquiring the TPSF from a single wavelength's injection pulse using the chosen detector overlaps between the respective wavelengths even if the injected pulses were not simultaneous."

Thus clearly the acquisition of the TPSF for the multiple wavelengths overlaps, i.e. is simultaneous.

Chance, while suggesting the use of multiwavelengths, does not teach or suggest the simultaneous detection of TPSF's at a plurality of wavelengths. In support of this assertion, at col. 16, line 49 to col. 17, line 9 in reference to Figure 8A, Chance teaches the use of time sequences to detect multiwavelengths signals:

"The imaging sequence consists of a series of pulses transmitted through the main fiber to an identified site at selected intervals ... Each pulse generates a photon migration pattern which is...recognized...by time encoding."

In other words, Chance teaches the use of sequential detection of TPSF's signals of different wavelengths to distinguish the signals. Therefore Chance teaches away from simultaneous TPSF detection at multiwavelengths.

The rejection of claims 1-16 under 35 U.S.C. 102(b) as being anticipated by Feng *et al.* is also traversed. It is submitted that Feng *et al.* teach a method in which contrast diffusion propagation signals are generated and used to provide an optical tomograph of an object. There is no teaching in Feng *et al.* of simultaneous detection of TPSF at multiple wavelengths. Feng *et al.* uses a laser source (single wavelength) to expose the target. The source is modulated at a certain frequency to enable a frequency domain acquisition. Several laser sources can be included, however, each is activated in sequence. For example, Feng *et al.* at col. 4, lines 23-24 states that "the method includes the operation wherein the target is exposed to plurality of light sources in sequence". Further, at col. 9, lines 29-41, it is specified that the sources are sequentially excited in both frequency and time. The detection is at one wavelength at a time. Thus, clearly not only do Feng *et al.* not teach simultaneous detection at muliple wavelengths but teach away from the present invention.

The Examiner also rejected claims 8, 9, and 14-16 under 35 U.S.C. 103(a) over Chance in view of Feng *et al.*

Claims 8 and 9 depend on claim 1 and in view of the above argument, the rejection is respectfully traversed since none of the cited references teach the simultaneous detection of TPSF. Therefore, even if Feng et al. teach the use of a CCD camera, there is no suggestion in Feng to simultaneously detect TPSF at multiple wavelengths.

Claim 14 is directed to a TPSF-based optical imaging apparatus which comprises a wavelength selection device for separating a plurality of wavelengths and a camera for detecting the plurality of wavelengths. This arrangement clearly provides for the simultaneous detection of TPSF's at a plurality of wavelengths and as argued above, neither Feng *et al.* nor Chance teach the simultaneous detection at multiple wavelengths.

Furthermore, there is no teaching in Feng *et al.* of a combination of a wavelength selection device and a camera for detecting the plurality of wavelengths. It is respectfully submitted that the bandpass filter in Feng *et al.* referred to by the Examiner is used to give a narrow band detection at the same modulation frequency as the excitation (see col. 9, lines 26-28).

Thus, this filter cannot be likened to the wavelength selection device as claimed in claim 14.

In view of the above comments, claim 14 and consequently, dependent claims 15 and 16, are patentable over the cited prior art.

Reconsideration of this application is requested.

Respectfully submitted,

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